Ohio Environmental Protection Agency
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Mary Taylor, Lt. Governor
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March 14, 2012

Ms. Michelle Kerr
Remedial Project Manager
U.S. EPA – Region 5
Mail Code: S-6J
77 West Jackson Blvd.
Chicago, IL 60604-3590

Re: Additional Ground Water Studies (AGWS) Supplemental Work Plan, Chemical Recovery Systems (CRS) Inc. (ID # 247000149006)

Dear Ms. Kerr:

Below are Ohio EPA's comments on the above-referenced document received on February 7, 2012. The additional work proposed for the CRS site is in response to the proposed supplemental work discussed during the November 14, 2011 meeting between the CRS Site Group and U.S. EPA. The need for additional investigation activities discussed in this meeting prompted the current revision to the March 2011 AGWS Work Plan.

The 2011 AGWS Work Plan was implemented during the summer and fall of 2011. Thirteen borings were installed between July and August of 2011 and converted to monitoring wells. However, the three proposed deep borings were not installed at locations 7S, X, and A (i.e., wells MW-7A, MW-13A, and MW-14A, respectively). These proposed installations were abandoned based on observed presence of NAPL in the shallow borings/wells installed at these locations, and concern that the shallow zone could not be adequately sealed off in the area of the former gas holders and preventing potential NAPL from migrating into deeper bedrock zones during drilling. Instead, two borings were advanced between the MW-7A and MW-13A area and along the river. The locations of these two borings were approved by U.S. EPA as shallow/deep wells MW-15A/MW-15B.

All of the onsite wells (7 existing and 13 new) were sampled in August of 2011, following installation of the new wells. NAPL was observed in wells MW-7A, MW-13A, and MW-14A during this sampling event.

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The 2012 AGWS Supplemental Work Plan has proposed the following activities to further evaluate the ground water, underlying bedrock, and NAPL at the site. The results of these additional studies will be submitted to the Agencies sometime in July of 2012.

The work will be completed to refine the hydrogeologic conceptual site model (CSM) and to finalize the AGWS report. This includes collection of temporal water level data, evaluation of potential bedrock seep zones along the west bank of the Black River, completing a bathymetric survey of the river base, and conducting permeability analysis of the underlying bedrock at the site. Also, additional surface water samples are proposed, as well as obtaining NAPL recovery rates from impacted wells and additional investigation of the underlying bedrock consisting of three more borings (I, J, and K) advanced in the area where NAPL is suspected to occur. This area has been identified as being centered between wells MW7A, MW13A, and MW14A.

COMMENTS:

1. Standard Operating Procedures (SOPs), Calibration Procedures, and Quality Assurance/Quality Control (QA/QC) During Field Activities.

a. Field sampling SOPs detailing the ground water and surface water Investigation activities were not included in the Supplemental Work Plan. The associated SOPs were not referenced and/or included in the 2012 Supplemental AGWS Work Plan to further support the field sampling procedures. SOPs should be referenced and/or included for all field readings and sample collections proposed in the work plan to further support the field sampling procedures.

b. A discussion is needed concerning the calibration procedures and standards to be used during field sampling. The 2012 Supplemental AGWS Work Plan lacks any discussion concerning the calibration standards that will be used during equipment calibration and during recovery and/or measurement activities.

c. Clarification is needed for those QA/QC procedures that will be employed during field sampling. The submittal did not discuss the collection of QA/QC samples during the various field sampling activities. Additional information should be provided that includes a discussion of the QA/QC procedures to be used.

d. Additional information is needed detailing the container preservation, shipping, and packaging procedures for the ground water samples. The

submittal did not provide a discussion concerning container preservation, shipping, and packaging activities. The 2012 Supplemental AGWS Work Plan needs to briefly discuss container preservation, shipping, and packaging procedures.

e. Decontamination procedures are needed in the 2012 Supplemental AGWS Work Plan. The submittal lacks any discussion concerning field decontamination procedures. A discussion on decontamination should be included in the 2012 (Supplemental) AGWS Work Plan.

Ohio EPA does acknowledge that the SOPs and ASTM standards are contained within Attachment A (Field Sampling Plan) of the March 2011 AGWS Work Plan, and the original work plan was noted in the *References* of the 2012 AGWS Work Plan. However, there does not appear to be any back reference of these procedures and protocols within the text of the 2012 Supplemental Work Plan. This could be stated within the *Introduction* of the 2012 Work Plan, which does mention that the work described in the plan itself will supplement the information collected in the summer and fall of 2011.

2. Section 2.2 – Additional Clarification Needed Concerning the Temporal Level Measurement Activities.

a. Section 2.2 indicates that a *"...barometric transducer will be installed in the unsaturated zone of one of the wells..."* (pg. 2-1). The criteria that will be used to select this well were not discussed in the text. Inclusion of this well within the final report would be sufficient if its location is currently not known.

b. As with the comment above, Section 2.2 states that a stilling well will be installed *"...in the river at the location of the existing gauging rod..."* (pg. 2-1). The location of this stilling well should be illustrated in future report figures.

c. Section 2.2 indicates that "...data will be downloaded periodically during the collection period to minimize the potential for data loss ..." (pg. 2-1). It is unclear how frequently this data will be downloaded.

3. Section 2.5 – The Procedure for Rock Permeability Testing Should be Included within the Final Report. U.S. EPA provided Ohio EPA a copy of ASTM method D4630 – 96 on March 8, 2012, which does describe the procedure in more detail.

4. Section 3.1 – Information on NAPL Recovery and Measurement Activities.

a. Additional information is needed concerning which wells will be used for NAPL recovery activities. Section 3.1 indicates that *"...NAPL bail-down tests will be conducted to quantify recovery rates and onsite NAPL transmissivities."* (pg. 3-1). However, the wells selected for this activity were not discussed in the submittal. If this information is not known yet, it can be documented in the final report.

Ohio EPA does not have comments that require substantive changes to the Work Plan. They are mainly for clarification. The Work Plan appears to be detailed enough to attain the necessary data objectives for purposes of refining the hydrogeologic conceptual site model.

Please feel free to contact me at (330) 963-1127, if there are any questions.

Sincerely,

Lawrence Antonelli
Site Coordinator
Division of Environmental Response and Revitalization

LA/kss

cc: Mike Eberle, Ohio EPA, NEDO, DERR